XAI KNOWLEDGE BANK

CLOSED-END FUNDS:

Using Alternatives to Achieve Your Retirement Goals

Finding new investment solutions for retirement is more urgent than ever, given the current low interest rate environment, the unfunded state of Social Security and declines in personal savings rates in the U.S. Even well-off retirees face the risk of substantially reduced income levels compared to their working years as well as the possibility of outliving their savings and leaving nothing to their heirs.

All retirees seek investment strategies to generate income that will last their lifetime and be protected from the devastating impact of inflation. Wealthy retirees also seek to preserve principal, so that they are able to leave a bequest. By incorporating alternative investments into their retirement portfolio, investors may be better positioned to achieve these investment goals of creating and maintaining wealth for generations. Alternatives may offer uncorrelated sources of returns and potentially higher yields than traditional investments. Modern advancements in closed-end fund (CEF) product design allow individual investors access to a broader set of alternative investment options.*

* Investments in alternatives involve risks, including loss of principal.

New Sources of Retirement Income

Funding for retirement typically comes from several sources, including a retiree's Social Security benefits, personal savings, annuities and pension plans. Unfortunately, these investment strategies may no longer be as effective as they once were. Social Security used to be the cornerstone of retirement planning for many Americans, but the Trust Fund Trustees estimate that Social Security will be insolvent by 2035.[1] As such, Social Security benefits could be significantly reduced. Furthermore, the personal savings rate in the U.S. has declined by 1.2% over the past five years, putting additional pressure on the need for other income sources.[2] Annuities can boost guaranteed income, but this 'guarantee' comes from a private insurance company that carries embedded credit risk. Therefore, the income may not be available when investors need it the most. Many insurance carriers experienced severe losses and credit downgrades during the financial crisis of 2007–2009.[3]

From 1998 to 2017, the percentage of employers offering a traditional defined benefit plan to newly hired employees fell from 50% to around 3%.[4] This decline confirms that responsibility for retirement outcomes has shifted away from the institution and to the individual.

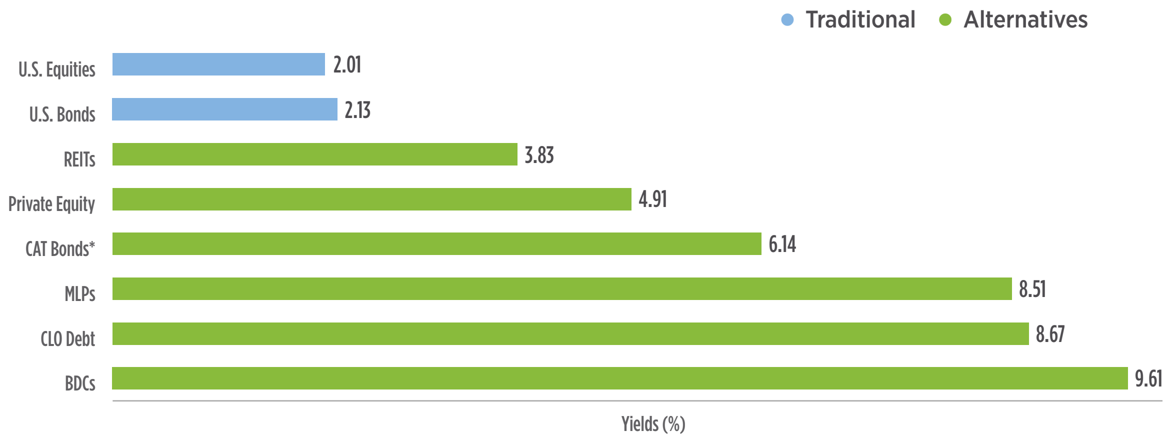
The metric used to determine how much annual income a retiree will need to maintain the same standard of living is called the replacement rate. For wealthy retirees, Social Security benefits alone can only replace a small percentage of their pre-retirement income. A Congressional Budget Office study[5] found that Social Security has a median replacement rate of 21% for those earning $141,900 and more per year. Reaching the replacement rate target can be very difficult for high earners, even for those with large retirement portfolios, especially in today's historically low interest rate environment. Retirees who spend-down their portfolio may outlive their assets or eliminate the possibility of leaving a bequest.

Retirement income typically is generated using income-producing investment strategies such as fixed income, which is vulnerable to credit risk and duration risk. More importantly, low current yields and the impact of inflation on real returns, are two problems associated with relying on traditional asset classes for significant sources of retirement income. By contrast, alternative investments may provide the enhanced yields wealthy retirees require to maintain their pre-retirement consumption patterns.

Alternative investments can also provide income diversification, so the retiree is less dependent upon the viability of a single insurance company

Income Comparison of Traditional Investments to Alternative Investments

Current Yields as of 8/30/2019



* CAT Bond yields as of 12/31/2018 based on available data.

Sources: us.spindices.com; JP Morgan CLOIE; alerian.com; MSCI.com; Bloomberg; swissre.com.

Note: See Asset Class Definitions on page 8 for the underlying indices of each asset class.

Past performance is no guarantee of future results.

or exposed to the duration risk inherent in traditional fixed income instruments. For instance, advisors can replace traditional fixed income strategies with floating-rate investments such as senior loans or catastrophe (CAT) bonds, which adjust based on changes in LIBOR and may benefit from rising rates.

Investors considering an allocation to alternatives should evaluate the associated risks, including greater complexity and higher fees relative to traditional investments. Investors should carefully weigh the diversification benefits, expected returns and volatility of alternatives relative to traditional investments. Investments in alternatives involve risks, including loss of principal.

Alternatives May Enhance Capital Preservation

Retirees planning for investment horizons that span multiple generations (i.e., the next 100 years) may be more inclined to use alternatives to help increase the longevity of their portfolio. By broadening their investment mix to include alternative asset classes, investors have the potential to both increase returns and decrease risks. This may result in improved longevity of their portfolio and better-preserved principal for the purpose of making a bequest.

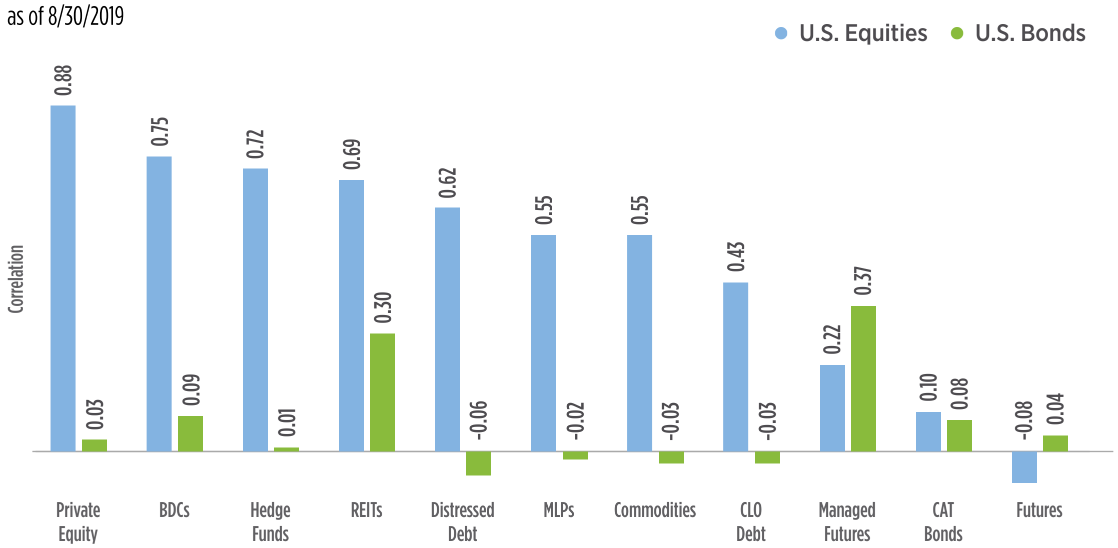
Historically, alternatives have demonstrated moderate-to-low correlation to traditional asset classes, therefore, the inclusion of alternatives can have a powerful effect on an investment portfolio by muting return volatility. The historical return correlations between certain alternatives and U.S. equities and U.S. bonds are shown below.

Measuring the Impact of Alternatives

The impact of adding alternatives to a portfolio can be modeled based on historical return analysis to quantify diversification and higher expected yields. Such an effort was undertaken by the Georgetown Center for Retirement Initiatives, in conjunction with Willis Towers Watson and

Correlation between Traditional Investments and Alternative Investments

as of 8/30/2019



Sources: JP Morgan CLOIE; Bloomberg.

Note: See Asset Class Definitions on page 8 for the underlying indices of each asset class.

Past performance is no guarantee of future results.

described in the June 2018 report, *"The Evolution of Target Date Funds: Using Alternatives to Improve Retirement Plan Outcomes."*[6] The study determined that including alternative investments can improve retirement income, boost long-term retirement spending and mitigate short-term risks near retirement.

Adding Alternatives Before Retirement

The research team evaluated the impact of adding alternatives, such as hedge funds, private equity and real estate, to a target date fund used by participants in defined contribution plans. The team compared the outcome to that of a target date fund portfolio composed only of traditional asset classes—equities, fixed income and cash. The analysis revealed that the addition of alternative asset classes improved retirement outcomes, by capturing diversification benefits such as reduced volatility and higher total returns. When the target date portfolio was modeled to include alternatives and then annualized at retirement, the study results showed a 17% increase in retirement income for the participant.[6]

Adding Alternatives After Retirement

The Georgetown and Willis Towers Watson teams also looked at the impact of adding alternatives to a target date portfolio following a participant's retirement. The results were similar: the diversified portfolio exhibited reduced volatility, higher expected returns and lower downside risk. The study also found that including alternative assets lowers the probability of depleting assets over a long retirement horizon.

Among many benefits, adding alternative asset classes to a retirement portfolio **increased income by**

17%[6]

Finding the Right Allocation to Alternatives

Armed with the benefit of this research, advisors can begin engaging their clients in a conversation about increasing portfolio allocations to alternative investments. There is a significant difference—and lag—in portfolio construction between large institutional defined benefit plans and individual investors. Large defined benefit plans are heavily allocated to alternatives, and the bigger the plan, the higher the allocation. In contrast, most individual investors are still employing a 60/40 portfolio (60% equities and 40% fixed income) with a significant under allocation to alternative investments. For example, in 2018, the average allocation of U.S. college and university endowments to alternatives ranged from 11–58%, with the larger-sized endowments allocating the greater percentage to alternative strategies.[7] Nonetheless, the average individual investor portfolio allocation to alternatives is less than 10%.[8]

Some advisors and investors believe non-core investments such as alternatives belong in a separate allocation or satellite holdings. Depending on an investor's risk appetite, the satellite holdings or alternative allocation could be 5% to 20%. A different method for allocating to alternatives is to consider using alternatives to replace traditional investment exposures based on their anticipated outcomes. For example, investors might consider replacing fixed income allocations to high yield bonds with an alternative income option that might offer higher yields, diversification potential and less duration risk.

In considering alternatives, an advisor should discuss the investor's risk tolerance, liquidity needs and other preferences. Alternative investments are on a spectrum of liquidity—from highly liquid (e.g., futures) to illiquid (e.g., private equity). Less liquid assets offer higher expected returns. These returns are known as liquidity premiums, which is the premium demanded by investors because the security is not easily converted into cash. By diversifying a 100% liquid portfolio of mutual funds and ETFs into alternatives, retirees stand to benefit from these liquidity premiums.

For conservative clients, the allocation to alternatives might be minimal. For others, who understand the benefits and risks of adding alternatives to a portfolio, a larger allocation may be appropriate. In addition, alternatives may enhance and sharpen an advisor's value proposition as they seek to meet investor needs, round out their investment exposure and improve diversification within their client's retirement portfolios. Advisors can engage existing and prospective clients by presenting these new and previously inaccessable investment opportunities favored by large institutional investors. Ultimately, the portfolio allocation to alternatives will be determined by the client's financial situation, risk tolerance, investment goals, investment time horizon, liquidity needs, income needs and other factors.

To learn more about liquidity premiums, please see the XA Investments white paper "Invest Like the Pros," available in the Knowledge Bank at xainvestments.com.

Access Opportunities for Alternatives

Advances in CEF design have made institutional alternative investments easily accessible to individual investors. CEFs are actively-managed registered funds that can invest all of the fund's assets in less liquid or illiquid investments. In contrast to private funds that also may invest without constraint in illiquid alternatives, CEFs offer investors certain conveniences, including electronic ticketing, lower investment minimums, increased regulatory protections and 1099 tax reporting.

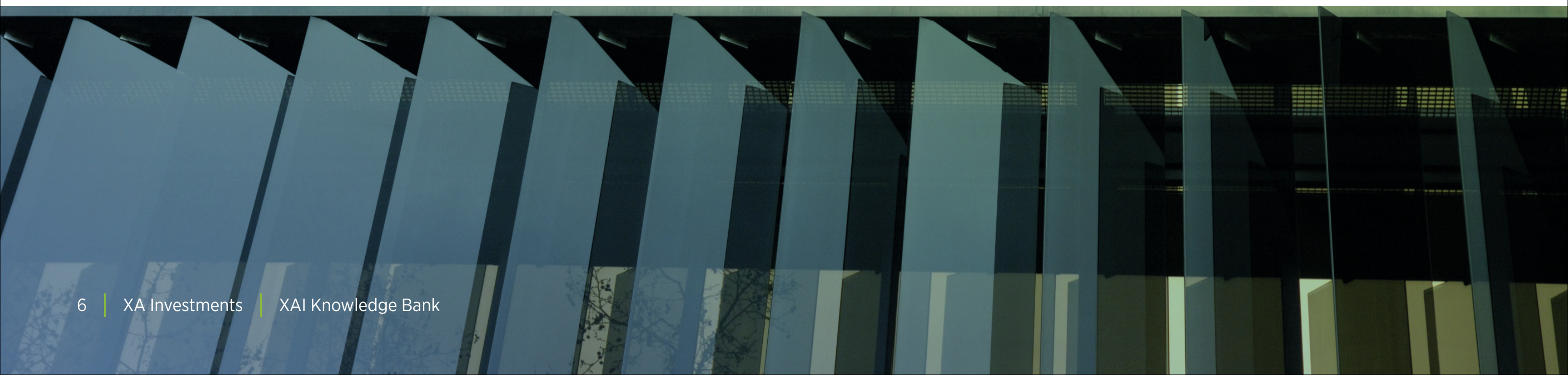
> **"Simply assessing fees, discounts or yield alone, are not the best ways to evaluate listed CEFs. You don't want to hire the cheapest doctor. Expenses shouldn't be ignored but they should be justified.[9]"**
>
> *John Cole Scott*
> *CEF Advisors*

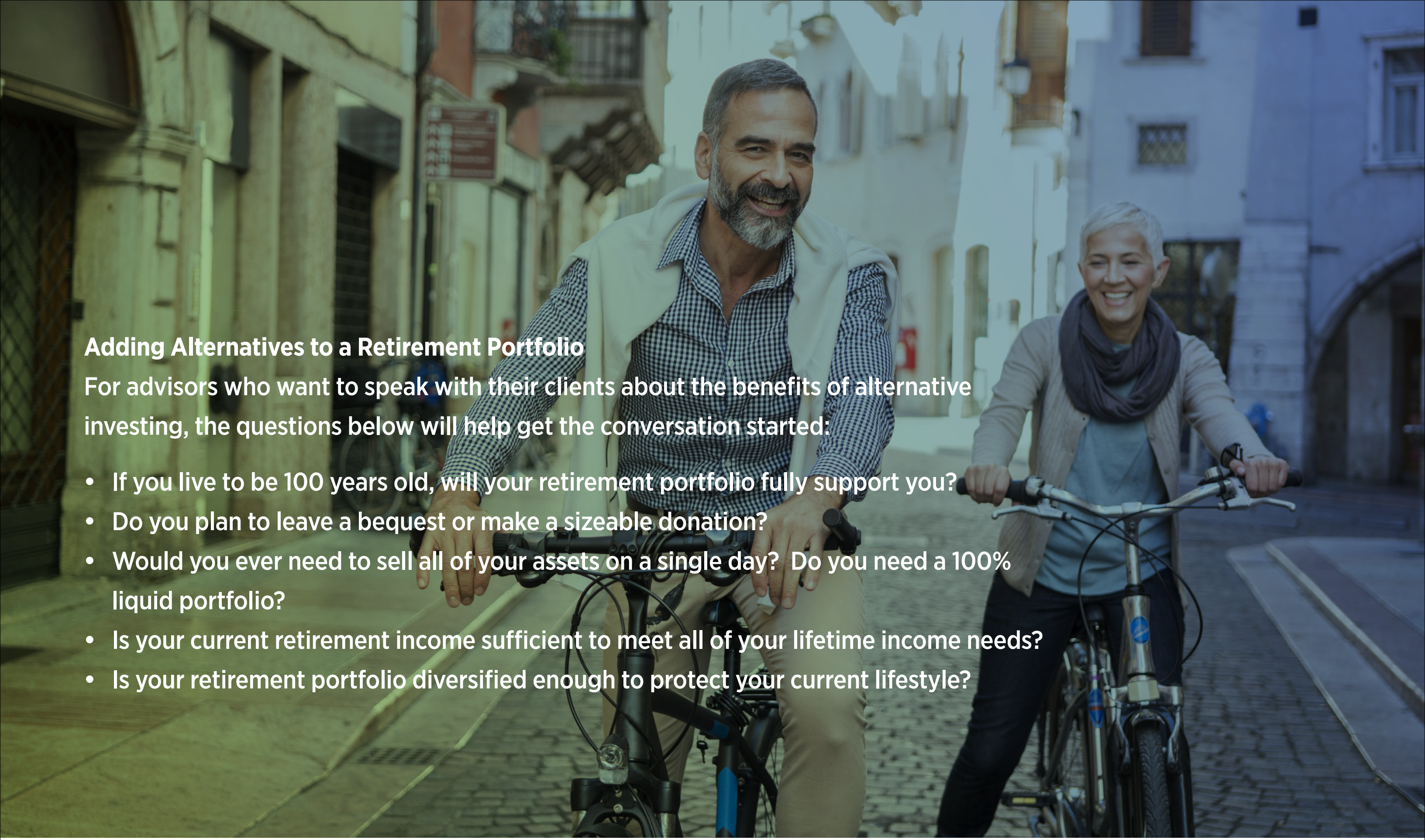
CEFs, for both regulatory and structural reasons, may be a fitting wrapper for alternative investments. CEFs are highly regulated and require board oversight for the benefit of common shareholders. This type of registered fund also offers the potential for attractive yield and alpha from illiquid investments, while still providing liquidity to investors at the fund level via trading on an exchange or regular tender offers. The listed CEF market includes both traditional and alternative income-oriented strategies and offers exchange-traded daily liquidity. Non-listed CEFs such as interval funds have also been growing in popularity as a means of accessing alternative strategies managed by institutional quality managers.

When investing in listed CEFs, it is important to evaluate the performance of a single CEF over time using several factors, including the stability and direction of distributions, premium/discount trends and net asset value (NAV) growth. Keen judgment is required to assess active management and to find the best managers in each asset class. "Simply assessing fees, discounts or yield alone, are not the best ways to evaluate listed CEFs," says John Cole Scott from CEF Advisors. "You don't want to hire the cheapest doctor. Expenses shouldn't be ignored but they should be justified.[9]" Manager selection is particularly important when investing in alternative CEFs since returns are driven largely by active management.

By using CEFs with alternative investment strategies, investors can now access potentially higher yielding sources of retirement income with the added advantage of diversifying their portfolio. To implement such a strategy, advisors must understand the alternatives in which they are investing, including the stability of the income stream they produce. Advisors also should understand how listed CEFs trade: at easily identifiable discounts or premiums to their underlying NAV. In turn, these patterns create buying and selling opportunities, which should be considered when it comes to implementing CEFs as part of a retirement strategy.

If you are interested in learning more about how to access institutional alternatives using CEFs, please see the XA Investments white paper "CEFs: Providing Newfound Access to Institutional Alternatives," available in the Knowledge Bank at xainvestments.com.





Adding Alternatives to a Retirement Portfolio

For advisors who want to speak with their clients about the benefits of alternative investing, the questions below will help get the conversation started:

- If you live to be 100 years old, will your retirement portfolio fully support you?
- Do you plan to leave a bequest or make a sizeable donation?
- Would you ever need to sell all of your assets on a single day? Do you need a 100% liquid portfolio?
- Is your current retirement income sufficient to meet all of your lifetime income needs?
- Is your retirement portfolio diversified enough to protect your current lifestyle?

About the Author

David Adler is an economic analyst and author. His work focuses on illiquidity and behavioral economics. For the CFA Institute Research Foundation, David wrote "The New Economics of Liquidity and Financial Frictions" published in December 2014. David has an MA and BA in economics from Columbia University. He serves as a Senior Advisor to XA Investments LLC.

Key Terms Definitions

For purposes of this publication, terms are defined below.

Alpha is a measure of the excess return of a manager or a fund relative to the return of the benchmark index.

Closed-end funds (CEFs) refer to investment vehicles that are registered with the U.S. Securities and Exchange Commission (SEC) under the Investment Company Act of 1940 ("The '40 Act"), as amended.

Duration risk refers to risk associated with the sensitivity of a bond's price to changes in interest rates.

Exchange-traded fund (ETF) refers to a passively-managed type of mutual fund that tracks a specified index or a basket of assets and trades on a stock exchange.

Illiquid assets are assets that cannot easily be sold or exchanged for cash in seven calendar days or less without a significant loss in value. The lack of ready buyers may lead to larger price discrepancies between asking price and the bid price.

Interval fund refers to a non-listed CEF that periodically offers to buy back a percentage of outstanding shares from shareholders through a tender offer process at prespecified time periods, or intervals.

LIBOR (London interbank offered rate) is an interest rate at which banks can borrow funds, in marketable size, from other banks in the London interbank market. The LIBOR is fixed on a daily basis by the British Bankers' Association. LIBOR is derived from a filtered average of the world's most creditworthy banks' interbank deposit rates for larger loans with maturities between overnight and one year.

Liquid alts refers to a mutual fund that purports to offer alternative investment strategies, which based on the SEC requirements of a mutual fund must be highly liquid (generally, 85% of a mutual fund's portfolio must be liquid, meaning its securities can be sold within 7 days without significantly impacting their value).

Liquidity is the degree to which an asset or security can be bought or sold easily without the transaction affecting the asset's price.

Liquidity premiums refer to the excess return of a security that cannot easily be converted to cash.

Listed CEF refers to a traditional listed closed-end fund, which is an actively managed portfolio of pooled assets that raises a fixed amount of capital through an initial public offering (IPO) and then is listed on a stock exchange. CEF shares trade like an equity, with prices that fluctuate throughout the business day.

Mutual funds are open-ended funds that are registered under The '40 Act. Shares of a mutual fund are continuously offered and bought directly from the fund and may be redeemed daily from the fund at their NAV.

Target date fund is a type of mutual fund that seeks to grow assets over a specific period of time based on investors' capital needs at a specific date.

Asset Class Definitions

Asset Class	Representative Index	Definition
Traditional		
U.S. Bonds	Barclays Capital US Aggregate Bond Index	A broad-based index that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market.
U.S. Equities	S&P 500 Total Return Index	A market capitalization-weighted index of the 500 largest U.S. publicly traded companies.
Alternatives		
BDCs	S&P BDC Total Return Index	An index that tracks the leading Business Development Companies (BDCs) that trade on major U.S. exchanges.
CAT Bonds	Swiss Re Cat Bond Total Return Index	An index used as a proxy for the global Catastrophe (CAT) bond market that tracks the performance of all CAT bonds, denominated in all currencies, issued under Rule 144A.
CLO Debt	J.P. Morgan CLO Index (BB CLO Debt)	An index that tracks the market for U.S. dollar-denominated broadly syndicated, arbitrage Collateralized Loan Obligations (CLOs). The sub-index tracks BB-rated CLO debt.
Commodities	Bloomberg Commodity Total Return Index	A highly liquid and diversified benchmark for commodity investments.
Distressed Debt	Eurekahedge Distressed Debt Hedge Fund Index	An equally weighted index of 25 constituent funds that provides a broad measure of the performance of underlying hedge fund managers.
Futures	S&P Strategic Futures Total Return Index	An index that reflects the long-term price trend of futures on physical commodities, interest rates, and currencies while limiting volatility and offering transparent, rules-based exposure to momentum, both long and short.
Hedge Funds	Hedge Fund Research HFRI Asset Weighted Composite Index	A global, asset-weighted index comprised of over 1,500 single-manager funds that report to HFR Database.
Managed Futures	Eurekahedge CTA/Managed Futures Index	An equal-weighted index of 380 constituent funds that provides a broad measure of the performance of underlying hedge fund managers.
MLPs	Alerian MLP Index	A capped, float-adjusted, capitalization-weighted index of energy Master Limited Partnerships (MLPs), whose constituents represent approximately 85% of the total float-adjusted market capitalization.
Private Equity	S&P Listed Private Equity Index	An index comprised of the leading listed private equity companies that is designed to provide tradable exposure to the leading publicly listed companies that are active in the private equity space.
REITs	MSCI US REIT Index	A free float-adjusted market capitalization weighted index that is comprised of equity Real Estate Investment Trusts (REITs).

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Risks

The information in this white paper is provided as a summary of complicated topics for informational and educational purposes and does not constitute legal, tax, investment or other professional advice on any subject matter. Further, the information is not all-inclusive and should not be relied upon as such. Illiquid investments are designed for long-term investors who can accept the special risks associated with such investments. An investment in illiquid investments involves risks, including loss of principal. CEFs frequently trade at a discount to the fund's net asset value. An investment in CEFs involves risks, including loss of principal. Investors considering an allocation to alternatives should evaluate the associated risks, including greater complexity and higher fees relative to traditional investments. Investors should carefully weigh the diversification benefits, expected returns and volatility of alternatives relative to traditional investments. Investments in alternatives involve risks, including loss of principal. **Performance data quoted represents past performance. Past performance does not guarantee future results. Current performance may be lower or higher than performance data quoted.** Diversification does not eliminate the risk of experiencing investment losses. You should not use this white paper as a substitute for your own judgment, and you should consult professional advisors before making any investment decisions. This white paper may contain "forward looking" information that is not purely historical in nature, including projections, forecasts, estimates of market returns, and proposed portfolio compositions. There is no guarantee that any forecasts will come to pass. This information does not constitute a solicitation of an offer to sell and buy any specific security offering. Such an offering is made by the applicable prospectus only. A prospectus should be read carefully by an investor before investing. Investors are advised to consider investment objectives, risks, charges and expenses carefully before investing. Financial advisors should determine if the risks associated with an investment are consistent with their client's investment objectives.

XA INVESTMENTS

321 North Clark Street, Suite 2430
Chicago Illinois 60654
1.888.903.3358 | xainvestments.com